

Understand the Main Idea

Objective Describe the kinds of things that fractions name.

30 minutes



Teach this lesson:

- **Before** introducing material on fractions in students' grade-level math textbooks
- **Before** students complete the activities on page 101 of the student worktext

You need these materials:

- a strip of paper
- counters
- Transparency 51
- scissors

Prerequisite

Background Knowledge

- Concept of division into parts
- Concept of equal parts

BP 3 ELL BEST PRACTICE #3: Performance Assessment

English language learners often know more than what they can demonstrate on traditional reading- and writing-based assessments. For this reason, it is often more effective to evaluate students' learning based on their work in ordinary classroom tasks. Pay attention to students' ability to read, write, and understand fractions as they carry out written, oral, and hands-on activities in the module. Take notes on what you observe.

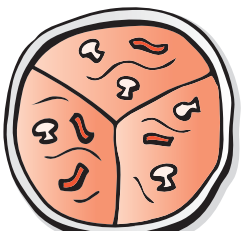
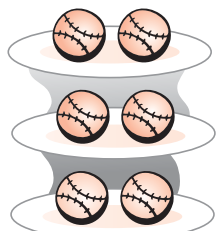

Throughout this module, when you see **BP 3**, you will find an example of how you can use performance assessment to evaluate students' comprehension of fractions.

Module 26: Read and Write Fractions

Understand the Main Idea

Objective Describe different kinds of things that fractions name.

Learn the Main Idea

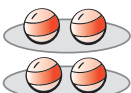
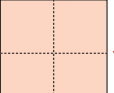

<p>This picture shows a whole pizza.</p>  <p>The whole has 3 equal parts.</p> <p>Fractions can name equal parts of a whole.</p>	<p>This picture shows a group of baseballs.</p>  <p>The group has 3 equal parts.</p> <p>Fractions can name equal parts of a group.</p>	<p>This picture shows a number line.</p>  <p>The number line shows $\frac{1}{3}$ and $\frac{2}{3}$.</p> <p>Fractions can name points on a number line.</p>
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MAIN IDEA Fractions name equal parts of a whole, equal parts of a group of objects, or points on a number line.

Practice Applying the Main Idea

Directions Draw a line to match each picture on the left with what the fraction shows on the right. Answer number 4 in a complete sentence.

<p>1</p> 	<p>equal parts of a whole</p>
<p>2</p> 	<p>points on a number line</p>
<p>3</p> 	<p>equal parts of a group</p>

4 Write a sentence that tells how equal parts of a whole and equal parts of a group are alike.
Possible answers: They are both examples of fractions; they are both ways of dividing things.

A Introduce

Activate students' background knowledge by taking a strip of paper and folding it into two equal pieces. Ask students to tell what you just did, using whatever words they can. Have each student tell a partner what he or she thinks. Then have partners share their ideas with the class.

Elicit that you folded the paper in half, or into two halves. Ask questions such as: *How many pieces did I make? (2) Are the pieces the same size? (yes)*

Write the word fraction on the board and read it aloud. Explain that the word *fraction* comes from a root meaning *to break*. Say: *When you break things into equal parts, you make fractions.*

Display the strip of paper you folded earlier. Ask students if this strip shows fractions. Have students explain their thinking. Elicit that the strip was folded into two equal parts, so the halves are an example of a fraction.

Invite students to tell about past experiences when they have made or used fractions.

Highlighted words and phrases may affect student comprehension.

Together with students, read aloud the Lesson Objective on page 101 in the student worktext. Then call students' attention to the first picture in the Learn the Main Idea box. Ask students to describe what they see.

- **Read the caption at the top of the picture, emphasizing the word *whole*.** Say: *There is just one pizza. It is a whole pizza.* Point out that the word *whole*, meaning *entire* or *complete*, is different from the word *hole*.
- **Then read aloud the statements below the picture.** Have students check that the three parts are equal. Say: *Fractions can name equal parts of a whole*, while drawing a circle in the air with your finger. Have students repeat your words and actions.
- **Repeat with the second picture, emphasizing the word *group*.** Stress that a *group* or *set* of objects includes not just one thing, but several. Say: *Fractions can name equal parts of a group*. Draw small circles in the air with your finger. Again, have students repeat.
- **Move on to the last picture.** Establish that number lines are divided into equal parts. Say: *You can show fractions on a number line, too.* Point out that the numbers marked between 0 and 1 are fractions. Say: *Fractions can name equal parts or distances on a number line.* Read aloud the text below the number line.

Conclude by reading aloud the Main Idea on page 101 of the student worktext. Have volunteers point to parts of whole, parts of a group, and the number line in the visual in the student worktext.

B Teach and Learn

Draw a square on the board. Explain that the square is one *whole* object. Draw lines to form four equal vertical slices. Explain that your picture now shows fractions. Say: *I had a whole square. I divided it into four equal parts.*

- **Then say:** *Fractions can name equal parts of a whole.* Have students practice this sentence by filling in missing phrases. For instance, say: *Fractions can name _____ of a whole*, and have students fill in *equal parts*. Or say: *Fractions can name equal parts of _____*, and have students supply *a whole*.
- **BP 3 Have students work with a partner.** Give each pair a sheet of paper.

Explain that the sheet of paper is a whole. Ask them to show fractions by folding the sheet to show equal parts. When they have done one number of equal parts, have them fold another sheet into a different number of equal parts. Then have them talk about their work with another pair. Go over this work with the class as a whole.

- **Wrap up this part of the lesson by having students clap and chant:** *Fractions can name equal parts of a whole.*

Draw four triangles on the board. Establish that this is a group of objects and is also called a set. Draw two loops around pairs of triangles. Point out that this picture now shows fractions. Say: *I had a group of triangles. I divided the group into two equal parts.*

- **Say:** *Fractions can name equal parts of a group.* As before, leave out phrases for students to say.
- **BP 3 Distribute twelve counters to each pair.** Instruct them to make equal parts and draw the results. Encourage them to find two to three different ways of making equal parts and then talk about their work with another pair.
- **Wrap up by having students clap and chant:** *Fractions can name equal parts of a group.*

Draw a number line on the board and label it 0, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$, and 1. Say: *This number line goes from 0 to ____.* Pause and let students complete the sentence with *1*. Say: *The number line has been broken into equal parts. Each part shows an equal distance.* Explain that the other numbers on the number line are fractions. Say: *Fractions can name points on a number line.* Have students finish the sentence: *Fractions can name points on _____.*

C Review and Practice

Display Transparency 51. Point to each picture in turn. Have students respond *equal parts of a whole*, *equal parts of a group*, or *equal parts of a number line*, and then say the sentence: *Fractions can name equal parts of a whole, equal parts of a group, or equal parts of a number line.*

- **BP 3 Have students work with a partner.** Have them take turns drawing wholes or groups and dividing them into equal parts. The student who is not drawing should

identify the picture as showing a whole or a group and then say the appropriate sentence beginning *Fractions can name equal parts of _____.*

Read aloud the directions for Practice Applying the Main Idea on page 101. Have students draw lines to match the picture with the kind of fraction it names. Have students complete numbers 1–4 on their own. Check their work.

D Assess and Intervene

Can students describe the different things that fractions name, based on Practice Applying the Main Idea on page 101? Use the rubric to identify students who need extra support through additional help and the Intervention activity.

Intermediate

- Connects all 3 pictures with the correct names.
- Writes a sentence that mentions fractions or dividing; errors may make comprehension difficult.

Example of a sentence a student might write: *Both are make fraction.*

Advanced

- Connects all 3 pictures with the correct names.
- Writes a sentence that mentions fractions or dividing; minimal errors do not affect comprehension.

Example of a sentence a student might write: *Both show equal part.*

INTERVENTION

5 minutes



If students have trouble with the activities on page 101, they may not be sure what the phrase *equal parts* means. Provide scissors and paper. Help students cut one sheet of paper into two equal parts. Have them say, *These are two equal parts.* Explain that these parts are a fraction of the whole. Then repeat, having students cut another sheet into two parts that are not equal. Have them say, *These are two unequal parts.* Explain that these are not fractions because they are not equal. Have students try making equal and unequal parts on their own.